

Application No. 09/346,470
Amendment dated April 18, 2003
Response to Office Action of October 21, 2002

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-39. Previously canceled

40-78. Canceled now without prejudice.

79. (New) An isolated nucleic acid molecule comprising a nucleotide sequence which encodes or is complementary to a sequence which encodes an ecdysteroid receptor (EcR) polypeptide that binds ecdysone, wherein the encoded EcR polypeptide consists essentially of the amino acid sequence set forth in SEQ ID NO:10.
80. (New) The isolated nucleic acid molecule of claim 79, wherein said sequence consists essentially of the nucleotide sequence set forth in SEQ ID NO:9.
81. (New) The isolated nucleic acid molecule of claim 79, wherein the isolated nucleic acid molecule further encodes an EcR partner protein (USP polypeptide) of a *Myzus persicae* EcR heterodimer, which USP polypeptide consists essentially of an amino acid sequence as set forth in SEQ ID NO:12.
82. (New) the isolated nucleic acid molecule of claim 81, wherein the USP polypeptide is encoded by the nucleic acid sequence set forth in SEQ ID NO:11.
83. (New) The isolated nucleic acid molecule of claim 81, wherein the USP polypeptide is identical to that encoded by cDNA present in plasmid pMpUSP (AGAL Accession No. NM99/04568).

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84. (New) The isolated nucleic acid molecule of claim 79, wherein said polypeptide consists of an amino acid sequence encoded by a cDNA present in the plasmid deposited under AGAL Accession No. NM99/04567.
 85. (New) An isolated nucleic acid molecule comprising a nucleotide sequence which encodes or is complementary to a sequence which encodes an ecdysteroid receptor (EcR) polypeptide that binds ecdysone, when said EcR polypeptide is in association with a USP polypeptide, said EcR polypeptide consisting of an amino acid sequence having at least 60% amino acid sequence identity to the amino acid sequence set forth in SEQ ID NO:10, wherein said encoded EcR polypeptide is not a *Drosophila melanogaster* EcR polypeptide.
 86. (New) The isolated nucleic acid molecule of claim 85, wherein said EcR polypeptide consists of an amino acid sequence having at least 80% amino acid sequence identity to the amino acid sequence set forth in SEQ ID NO:10.
 87. (New) The isolated nucleic acid molecule of claim 86, wherein said EcR polypeptide consists of an amino acid sequence having at least 90% amino acid sequence identity to the amino acid sequence set forth in SEQ ID NO:10.
 88. (New) The isolated nucleic acid molecule of claim 85, wherein the EcR polypeptide is derived from a member of the genus *Myzus*.
 89. (New) The isolated nucleic acid molecule of claim 85, wherein the insect is *Myzus persicae*.
 90. (New) The isolated nucleic acid molecule of claim 85, wherein the isolated nucleic acid molecule further encodes an EcR partner protein (USP polypeptide) of the *M. persicae*

EcR polypeptide, wherein the USP polypeptide consists essentially of an amino acid sequence set forth in SEQ ID NO:12.

91. (New) A genetic construct comprising the isolated nucleic acid molecule of claim 79, wherein said nucleotide sequence is operably linked to a promoter sequence.
92. (New) The genetic construct of claim 91, wherein said promoter sequence is a MMTV, SV40, polyhedrin or p10 promoter sequence.
93. (New) A cell comprising the genetic construct of claim 91.
- C? 94. (New) The cell of claim 93, wherein the cell further comprises a nucleic acid molecule encoding an ecdysteroid receptor partner protein (USP polypeptide) which is expressed in said cell.
95. (New) An isolated nucleic acid molecule comprising a nucleotide sequence which encodes or is complementary to a sequence which encodes a ecdysteroid receptor (EcR) polypeptide, wherein said ecdysteroid receptor polypeptide is not from *Drosophila melanogaster*, wherein said EcR polypeptide binds ecdisone, and wherein said nucleotide sequence is selected from the group consisting of:
- (i) a nucleotide sequence having at least 60% identity to the nucleotide sequence set forth in SEQ ID NO:9, or a complementary nucleotide sequence thereto;
 - (ii) a nucleotide sequence that hybridises under at high stringency conditions to the nucleotide sequence set forth in SEQ ID NO:9 or to a complementary nucleotide sequence thereto, wherein high stringency conditions are a hybridisation and/or a wash carried out in 0.1xSSC-0.2xSSC buffer, 0.1% (w/v) SDS at a temperature of at least 55°C;

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- (iii) a nucleotide sequence having at least 60% identity to a nucleotide sequence of a cDNA present in the plasmid deposited under AGAL Accession No. NM99/04567; and
- (iv) a nucleotide sequence that is capable of hybridising under high stringency conditions to a cDNA present in the plasmid deposited under AGAL Accession No. NM99/04567, wherein high stringency conditions are a hybridisation and/or a wash carried out in 0.1xSSC-0.2xSSC buffer, 0.1% (w/v) SDS at a temperature of at least 55°C.
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